What is claimed is:

1. A color thermal printer for printing at least three primary color images on a recording material in frame sequential fashion, said color thermal printer comprising:

a feeding motor for feeding said recording material;

at least one thermal head for printing one of said three primary color images on said recording material by one line in a one-line printing cyclic process, said thermal head having each heating element for generating heat based on image data by pressing said recording material with predetermined pressing force;

a correction device for setting a correction coefficient, said correction device including at least one of a type dependency correction unit, a humidity dependency correction unit, and a sheet number dependency correction unit, said type correction unit setting a type dependency correction coefficient based on a type of said recording material, said humidity correction unit setting a humidity dependency correction coefficient based on the humidity, and said sheet number correction unit setting a sheet number dependency correction coefficient based on accumulative sheet number, said correction coefficient being based on said type correction coefficient, said humidity correction coefficient, and said sheet number correction coefficient;

a determination device for calculating a printing load per said one line based on said image data, said pressing force of said thermal head, and said correction coefficient; and

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a motor controller for controlling the rotation speed of said feeding motor according to the printing load per said one line.

5   2. A color thermal printer as claimed in claim 1, wherein said determination device comprises:

a first converter for converting said image data of said one line to the heat energy for respectively said heating elements;

10   a second converter for converting the heat energy of respectively said heating elements to coefficients of dynamic friction; and

a printing load calculator for calculating said printing load of said one line based on said coefficients of dynamic

15   friction, said correction coefficient, and said pressing force.

3. A color thermal printer as claimed in claim 2, wherein said printing load calculator corrects said coefficients of dynamic friction by using of said correction coefficient,

20   calculates the average value of said corrected coefficients of dynamic friction, and calculates said printing load of said one line by multiplying said average value by said pressing force.

4. A color thermal printer as claimed in claim 2, wherein

25   said feeding motor is a stepping motor, and rotates feeder roller pairs for feeding said recording material by nipping thereof.

5. A color thermal printer as claimed in claim 2, wherein

data of said type of said recording material detected by a type

discerning sensor is input in said type correction unit, further

comprising a humidity sensor for detecting said humidity, wherein

data of said detected humidity is input in said humidity

5   correction unit, and data of said accumulative sheet number

detected by a sheet counter is input in said sheet number

correction unit.

6.   A color thermal printer for printing at least three

10   primary color images on a recording material in frame sequential

fashion, said color thermal printer comprising:

a feeding motor for feeding said recording material;

at least one thermal head for printing one of said three

primary color images on said recording material by one line in

15   a one-line printing cyclic process, said thermal head having

each heating element for generating heat based on image data

by pressing said recording material with predetermined pressing

force;

a correction device for setting a correction coefficient,

20   said correction device including at least one of a type dependency

correction unit, a humidity dependency correction unit, and a

sheet number dependency correction unit, said type correction

unit setting a type dependency correction coefficient based on

a type of said recording material, said humidity dependency

25   correction unit setting a humidity dependency correction

coefficient based on the humidity, and said sheet number

dependency correction unit setting a sheet number dependency

correction coefficient based on accumulative sheet number, said

correction coefficient being based on said type correction coefficient, said humidity correction coefficient, and said sheet number correction coefficient;

a determination device for calculating a printing load per said one line based on said image data, said pressing force of said thermal head, and said correction coefficient; and

a printing controller for changing said one-line printing process according to said printing load of said one line.

7. A color thermal printer as claimed in claim 6, wherein said determination device comprises:

a first converter for converting said image data of said one line to the heat energy for respectively said heating elements;

a second converter for converting the heat energy of respectively said heating elements to coefficients of dynamic friction; and

a printing load calculator for calculating said printing load of said one line based on said coefficients of dynamic friction, said correction coefficient, and said pressing force.

8. A color thermal printer as claimed in claim 7, wherein said printing load calculator corrects said coefficients of dynamic friction with said correction coefficient, calculates the average value of said corrected coefficients of dynamic friction, and calculates said printing load of said one line by multiplying the average value by said pressing force.

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9. A color thermal printer as claimed in claim 8, wherein data of said type of said recording material detected by a type discerning sensor is input in said type correction unit, further comprising a humidity sensor for detecting said humidity, wherein data of said detected humidity is input in said humidity correction unit, and data of said accumulative sheet number detected by a sheet counter is input in said sheet number correction unit.